

WHAT IS CLAIMED IS:

1. Spraying bowl for a rotary sprayer projecting coating product, said bowl being equipped with means for magnetic coupling with a member for driving in rotation or with a casing surrounding said member,
5 wherein said magnetic coupling means are adapted to cooperate with complementary means borne by said member or said casing, in such a manner that the magnetic coupling effort obtained has a radial component with respect to the axis of rotation of said bowl.
- 10 2. The bowl of Claim 1, wherein said magnetic coupling means comprise at least one magnetic element which is either disposed around a male part of said bowl adapted to be engaged in a central housing of said member or of said casing, or disposed inside a female part of said bowl forming a housing for receiving a central shaft fast with said member.
- 15 3. The bowl of Claim 2, wherein said magnetic elements form radial flanges which extend either towards the outside from said male part or towards the geometrical axis of rotation of said bowl from said female part.
4. The bowl of Claim 2, wherein permanent magnets are disposed between each pair of adjacent magnetic elements.
- 20 5. The bowl of Claim 2, wherein it presents no magnets.
6. The bowl of Claim 2, wherein said magnetic elements are inscribed in an enveloping surface convergent in the direction of the free end of said male part or divergent in the direction of the opening of the housing of said female part.
7. The bowl of Claim 2, wherein said male part is hollow and forms a
25 channel for supplying coating product for a spraying surface and/or edge of said bowl.
8. The bowl of Claim 1, wherein means are provided for fitting on said member, said magnetic coupling means being disposed around said fitting

means and adapted to cooperate with complementary means not driven in rotation by said member, in order to contribute to an effort of fit of said bowl on said member.

9. Device for spraying coating product comprising a bowl and a member
5 adapted to drive said bowl in rotation, means for magnetic coupling between said bowl and said member or between said bowl and a casing surrounding said member being provided and including at least one permanent magnet, wherein said coupling means are disposed so that the effort of magnetic coupling has a radial component with respect to the axis of rotation of said bowl.
10. The device of Claim 9, wherein said magnetic coupling means further comprise at least one magnetic body associated with said magnet, and mounted on one of the two elements constituted by said bowl and said member or said bowl and said casing, while the other element bears at least one rib formed of a magnetic material.
- 15 11. The device of Claim 10, wherein the thickness of said rib or ribs is substantially equal to the thickness of said body or bodies.
12. The device of Claim 10, wherein it comprises a plurality of magnetic bodies and a plurality of ribs,
and the relative spacing of said ribs is substantially equal to, or corresponds
20 substantially to a multiple or a sub-multiple, of the relative spacing of said bodies.
13. The device of Claim 10, wherein said bowl is provided with a male part around which said ribs or said bodies is/are disposed, while said drive member is provided with a central housing for receiving said male part, magnetic coupling
25 elements, complementary of those borne by said bowl, being provided in said housing, around said male part.

14. The device of Claim 13, wherein said magnet or magnets and the associated magnetic bodies are grouped together in the form of a cartridge disposed in said housing, while said ribs are provided around said male part.

15. The device of Claim 13, wherein the volume for reception of said male part in said housing is defined by a surface of revolution centered on the axis of rotation of said drive member and divergent in the direction of the opening of said housing, while said ribs or said bodies borne by said male part are inscribed in an enveloping surface which has substantially the same geometry as that defining said volume and which is convergent in the direction of the free end of said male part.

16. The device of Claim 10, wherein said bowl is provided with a female part inside which said ribs is/are formed, while said drive member is provided with a central shaft adapted to be engaged in a housing formed in said female part, magnetic coupling elements complementary of those borne by said bowl being mounted on said shaft.

17. The device of Claim 16, wherein the housing formed in said female part for receiving said shaft is defined by a surface of revolution centered on a central axis of said bowl and divergent in the direction of the opening of said housing, while said bodies or said ribs borne by said shaft are inscribed in an enveloping surface which has substantially the same geometry as that defining said housing and which is convergent in the direction of the free end of said shaft.

18. The device of Claim 9, wherein said bowl is provided with a male part adapted to be inserted in a housing defined by a casing surrounding said drive member, said male part itself being equipped with means for fitting on said member.

19. The device of Claim 18, wherein said fitting means comprise a truncated bearing surface of shape substantially complementary of that of the end of said member.
20. The device of Claim 9, wherein said drive member is provided with a central channel for supplying coating product, while said bowl is provided with a central channel for supplying coating product for a discharge surface and/or edge, said channels being connected to each other when said bowl is magnetically coupled to said member or to said casing, the magnetic coupling occurring around one of said channels.
21. The device of Claim 9, wherein relief elements for gearing are provided on said bowl and on said member.
22. Installation for spraying coating product, wherein it comprises at least one spraying device according to Claim 9.